

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow. After amending the claims as set forth above, claims 1-13 are pending and are resubmitted for reconsideration.

Applicant wishes to thank the Examiner for the careful consideration given to the claims.

Claims 1, 3-4, and 7-10 have been amended to correct minor typographical and grammatical errors.

Claim Objections

Claims 10 is objected to because of a minor typographical error. Claim 10 has been amended to correct this minor informality. For at least this reason, favorable reconsideration of the objection is respectfully requested.

Rejection of claim 10 under 35 U.S.C. 112

Claim 10 is rejected under 35 U.S.C. 112, second paragraph, because of the second occurrence of "electric conductivity measuring means" in lines 5-6 and the occurrence of "ion exchange resin filter" in line 7. Claim 10 has been amended to correct these minor informalities. For at least these reasons, favorable reconsideration of the rejection is respectfully requested.

Rejection of claims 1-2 and 4-10 under 35 U.S.C. 102

Claims 1-2 and 4-10 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 09-231990 ("Fuji"). For at least the following reasons, this rejection is traversed.

Claim 1 recites the features "a judgment part judging whether replacement of the ion exchange resin filter is needed based on a comparison between a predetermined reference electric conductivity and an electric conductivity of water circulating in the circulating flow path as measured by the electric conductivity meter a predetermined time after a start of water circulation." Fuji does not teach or suggest this feature. In particular, Fuji discloses an operation method of an ion exchange water treatment device for fuel cell monitoring. An electric conductivity of the treated water on the entrance side of a last stage 27D of ion exchange resin cylinders 27 is monitored by a conductivity sensor 28, and the replacing of the stages 27A-27C upstream of the last stage 27D with new ones is determined when the electric conductivity exceeds a predetermined level. (See Abstract and Fig. 1 of Fuji.) However, Fuji

fails to teach a judgment part to judge whether the ion exchange cylinders need replacement based on a comparison between a predetermined reference value and an electric conductivity of water after a predetermined time after a start of water circulation (hereinafter referred to as the “predetermined time.”). In other words, Fuji does not teach the timing for the measurement of the electric conductivity at all but merely describes the comparison of the measured electric conductivity with respect to a specified reference value. Because Fuji does not teach the comparison of an electric conductivity of water after a predetermined time with a predetermined reference value, Fuji does not teach or suggest all the features of claim 1.

Claims 2 and 4-8 depend from and contain all the features of claim 1, and are allowable therewith for at least the same reasons as claim 1, without regard to the further patentable features contained therein. However, Applicant would like to note at least a few instances in which the features of some of the dependent claims are not anticipated by Fuji.

For example, claim 4 recites “the predetermined time is set on a basis of an initial electric conductivity of water circulating in the circulating flow path.” The PTO states that the initial electric conductivity in claim 4 is met by the initial electric conductivity in Fuji before the pump therein is started.” (Paragraph 7 of Office Action.) However, this assertion by the PTO does not address the claim recitations of claim 4. Claim 4 recites that the predetermined time is based on an initial electric conductivity, not just requiring an initial electric conductivity. As previously mentioned, Fuji does not teach or suggest the predetermined time, and thus cannot disclose or suggest the basis for setting the predetermined time. Whether Fuji discloses an initial electric conductivity or not is not sufficient to address all the features of claim 4, because the initial electric conductivity is used as a basis to determine the predetermined time. Thus, Fuji does not teach or suggest all the features of claim 4.

Claim 5 recites “wherein the predetermined time is set shorter than a period in which the electric conductivity of water circulating in the circulating flow path reaches a steady-state value.” The PTO asserts that “a steady-state of electric conductivity is not reached because the same is constantly changing.” (Paragraph 7 of the Office Action.) As previously mentioned, Fuji does not teach or suggest the predetermined time, and thus cannot disclose or suggest the length of the predetermined time. Whether steady-state is achieved in Fuji or not is not sufficient to address all the features of claim 5, because the steady state of

conductivity is used as a reference point for the length of the predetermined time (which Fugi does not teach). Thus, Fugi does not teach or suggest all the features of claim 5.

Claim 8 recites “wherein the predetermined time is set to a period in which the water circulating in the circulating flow path circulates through the circulating flow path for a predetermined number of times.” The PTO merely asserts that this features is “inherently met by the teachings of Fugi.” (Paragraph 7 of the Office Action.) As previously mentioned, Fugi does not teach or suggest the predetermined time, and thus cannot disclose or suggest the setting of the predetermined time. In addition, the assertion of inherency has not been established, as set forth in MPEP 2112 which reads:

“In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.” *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original)

In this case, the PTO has not provided any basis in fact or technical reasons to support the determination that the predetermined time is set to a period in which the water circulating in the circulating flow path circulates through the circulating flow path for a predetermined number of times. Indeed, because Fugi does not teach the predetermined time at all, it is not possible that the setting of the predetermined time necessarily flows from the teachings of Fugi. Thus, Fugi does not teach or suggest all the features of claim 8. The PTO’s broad interpretation of the claim language impermissibly reads out of the claim the term “predetermined.”

Claim 9 recites “judging whether the ion exchange resin filter needs replacement based on a comparison between a predetermined reference and an electric conductivity of water circulating in the circulating flow path as measured by the electric conductivity meter a predetermined time after a start of water circulation.” Claim 10 recites “a judging means for judging whether the ion exchange means needs replacement based on a comparison between a predetermined reference and an electric conductivity of water circulating in the circulating flow path as measured by the electric conductivity means a predetermined time after a start of water circulation.” As previously mentioned, Fugi does not teach or suggest the predetermined time, and thus cannot disclose or suggest all the features of claims 9 or 10.

For at least these reasons, favorable reconsideration of the rejection is respectfully requested.

Allowability of claim 13

Claims 11-13 further specify the predetermined time. These claims depend from and contain all the features of claim 1 or claim 9, and are allowable therewith for at least the same reasons provided above, without regard to the further patentable features contained therein. For at least this reason, allowance of these claims is respectfully requested.

Conclusion

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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